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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/520,611 | 01/09/2005 | Renaud Dore | PF020086 | 9649 |

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EXAMINER

AMINZAY, SHAIMA Q

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2618

DATE MAILED: 11/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/520,611

Applicant(s)

DORE ET AL.

Examiner

Shaima Q. Aminzay

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification Objection

1. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

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- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Title Objection

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections – 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action.

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nche (Nche et al., U. S. Patent 6,484,012) in view of Beasley (Beasley et al., U. S. Patent 5,924,022).

Regarding claim 1, Nche discloses radio communication repeater (see for

example, Figures 1-4, column 1, lines 7-10, column 2, lines 50-59, column 3, lines 1-13) wherein it includes: a first path to receive signals in a first frequency band (see for example, Figure 3, column 6, lines 25-55, the first path receiving the ISM band (first frequency band)), to translate the received signals into a second frequency band and to transmit in the second frequency band (see for example, Figure 3, column 6, lines 25-55, translating to PCS band (second frequency band) and transmitting the PCS band), a second path to receive signals in the second frequency band (see for example, Figure 3, column 6, lines 25-37, lines 56-67, column 7, lines 1-3, the second path receiving the PCS band (second frequency band)), to translate the received signals into the first frequency band and to transmit in the first frequency band (see for example, Figure 3, column 6, lines 25-37, lines 56-67, column 7, lines 1-3, translating to ISM band (first frequency band) and transmitting the ISM band); and a management circuit to disable transmission from the first path if the second path receives signals first (see for example, Figure 3, column 6, lines 25-37, lines 56-67, column 7, lines 1-39, the transmission from the one path (first) will not take place if the other path (second) signal is ready to be transmitted), and to disable transmission from the second path if the first path receives signals first said first (see for example, Figure 3, column 6, lines 25-37, lines 56-67, column 7, lines 1-39, the transmission from the other path (second) will not take place if the first path signal is ready to be transmitted considering the frequency bands of the signals) and second frequency bands being separated (see for example, Figure

3, column 6, lines 25-37, lines 56-67, column 7, lines 1-39, the transmission signals frequency bands are separated).

Nche does not specifically teach disabling the first or second path while transmitting, however, Nche teaches transmission of the first received signal (see for example, *Figure 3, column 6, lines 25-37, lines 56-67, column 7, lines 1-39*).

In a related art dealing with radio communication repeater (see for example, *Figures 1, 4, 6, column 1, lines 7-12, column 4, lines 33-67*), Beasley teaches the repeater Selector Path disabling the path that is not transmitting (see for example, *Figures 1, 4, 6, column 6, lines 29-54*).

It would have been obvious to one of ordinary skill in the art at the time invention was made to combined Beasley's repeater Selector Path with Nche's radio communication system to provide a radio repeater system with frequency conversion, "frequency-convert the first and second receive signals to different frequencies at the RF repeater before passing them through the signal conduit", and "to effect diversity selection of one of these two signal" "to counteract frequency band-specific noise on the signal conduit" to improve receiver capability and extending receiver coverage area (Beasley, see for example, *column 3, lines 8-16, column 2, lines 3-9*).

Regarding claim 3, Nche in view of Beasley teach all the claimed limitations as recited in claim 1, and further, Beasley teaches wherein the management circuit includes thresholding means to compare the received signals with a

receive threshold (see for example, column 5, lines 17-24, lines 64-67, column 6, lines 7-15), the signals being considered received if they are above the said threshold (see for example, column 5, lines 17-24, lines 64-67, column 6, lines 7-15).

Regarding claim 4, Nche in view of Beasley teach all the claimed limitations as recited in claim 1, and further, Nche teaches wherein the first path includes a first translation means to translate the signals from the first frequency band to an intermediate frequency band and a second translation means to translate the signals from the intermediate frequency band to the second frequency band (see for example, Figure 3, column 6, lines 38-67 continued to column 7, lines 1-39), in that the second path includes a first translation means to translate the signals from the second frequency band to the intermediate frequency band and a second translation means to translate the signals from the intermediate frequency band to the first frequency band (see for example, Figure 3, column 6, lines 38-67 continued to column 7, lines 1-39), and in that the repeater includes a first local oscillator cooperating with the first translation means of the first path and the second translation means of the second path (see for example, Figure 3, column 6, lines 25-37, lines 56-67, column 7, lines 1-39), and a second local oscillator cooperating with the second translation means of the first path and the first translation means of the second path (see for example, Figure 3, column 6, lines 25-37, lines 56-67, column 7, lines 1-39).

Regarding claim 5, Nche in view of Beasley teach all the claimed limitations as recited in claim 1, and further, Nche teaches wherein the thresholding means compare the signals in the intermediate frequency band (*see for example, column 4, lines 33-42, column 5, lines 17-24, lines 64-67, column 6, lines 7-15, lines 29-34, lines 39-49*).

Regarding claim 6, Nche in view of Beasley teach all the claimed limitations as recited in claim 1, and further, Nche teaches wherein the management circuit disables the transmission means of the first and second paths when no signal is received by the first and second paths.

Regarding claim 7, Nche in view of Beasley teach all the claimed limitations as recited in claim 1, and further, Nche teaches wherein the disabling of the transmission means of the first and second paths is carried out by cutting the power to amplifiers (*see for example, column 4, lines 33-42, column 5, lines 17-24, lines 64-67, column 6, lines 7-15, lines 29-34, lines 39-49*).

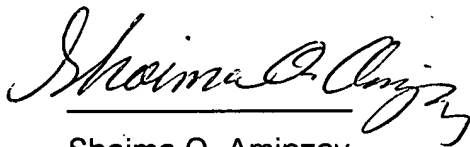
Conclusion

The prior art made of record considered pertinent to applicant's disclosure, see PTO-892 form.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shaima Q. Aminzay whose telephone number is 571-272-7874. The examiner can normally be reached on 7:00 AM -4:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mathew D. Anderson can be reached on 571-272-4177. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

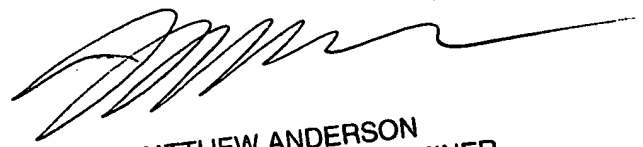
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Shaima Q. Aminzay

(Examiner)

November 10, 2006



MATTHEW ANDERSON
SUPERVISORY PATENT EXAMINER